	Type	Hits	Search Text
1	BRS	5705	collagen and salmon
2	BRS	2	collagen near (salmon and skin)
3	BRS	4251	collagen and salmon and skin
4	BRS	26	collagen with (salmon and skin)
5	BRS	57	collagen same (salmon and skin)
6	BRS	2	collagen with (salmon and skin) and silk

```
      Set  Items  Description
      ---  -----  -----------
? s collagen
      S1  554661  COLLAGEN
? s fish(n)skin
         1335781  FISH
         1882647  SKIN
      S2    1390  FISH(N)SKIN
? s s1 and s2
          554661  S1
            1390  S2
      S3     163  S1 AND S2
? s s3 and silk(N)filter
             163  S3
           34974  SILK
          406426  FILTER
               1  SILK(N)FILTER
      S4       0  S3 AND SILK(N)FILTER
? s s3 and lactic(n)acid
Processing
Processed  20 of  29 files ...
Completed processing all files
             163  S3
          212734  LACTIC
        11888581  ACID
          165569  LACTIC(N)ACID
      S5       7  S3 AND LACTIC(N)ACID
? t s5/6,k/all

 5/6,K/1     (Item 1 from file: 34)
DIALOG(R)File  34:(c) 2006 Inst for Sci Info. All rts. reserv.

14118709   Genuine Article#: 942AX   Number of References: 28
Title: Use of  lactic  acid  for extraction of  fish  skin  gelatin  (
    ABSTRACT AVAILABLE)
Publication date: 20051100

Title: Use of  lactic  acid  for extraction of  fish  skin  gelatin
Abstract: The ability of  lactic  acid  compared to acetic acid for Dover
    sole (Solea vulgaris) skin swelling and the subsequent gelatin...

...distribution, gel strength, viscoelastic properties, ability to refold
    into triple helical structures, and aggregation phenomena.  Lactic
    acid  (25 mM) proved to be an excellent substitute for acetic acid
    during the skin swelling...

...acid without the negative organoleptic properties of this acid. However,
    the application of 50 mM  lactic  acid  gave rise to a highly
    hydrolysed gelatin, with lower folding ability, gel strength and
    viscoelastic properties than those obtained using 25 mM  lactic  acid
    or 50 mM acetic acid. (C) 2004 Elsevier Ltd. All rights reserved.
...Identifiers-- COLLAGEN  TRIPLE-HELIX; FUNCTIONAL-PROPERTIES; HYSTERESIS;
    STEP


 5/6,K/2     (Item 2 from file: 34)
```

copolymer poly(hydroxybutyrate-co-hydroxyvalerate) (PHBV), poly- **lactic acid** (PLA) and **collagen** , using HL-7702 cells, in term of cell attaching rate within 3 hours, cell viabilities...

...of the HL- 7702 cells on both Pzein and Fzein was higher than that on **collagen** film. Cell viabilities were higher on both Pzein and Fzein than on films of PLA, PHB, PHBV and **collagen** from **fish skin** . Zein can be degraded by both trypsin and collagenase, and the degradation product can enhance...

DESCRIPTORS: Zein; Films; **Collagen** ; Trypsin; Degradation products; Collagenase; Copolymers; Degradability; bromides; Skin; Biomaterials ; Biopolymers

5/6,K/7 (Item 1 from file: 155)
DIALOG(R)File 155:(c) format only 2006 Dialog. All rts. reserv.

15525247 PMID: 15898117
Comparison of cytocompatibility of zein film with other biomaterials and its degradability in vitro.
Aug 5 2005

... compared with polyhydroxybutyrate (PHB), its copolymer poly(hydroxybutyrate-co-hydroxyvalerate) (PHBV), polylactic acid (PLA), and **collagen** , using HL-7702 cells, in terms of cell attachment rate within 3 h, and cell...

...of the HL-7702 cells on both Pzein and Fzein was higher than that on **collagen** film. Cell viabilities were higher on both Pzein and Fzein than on films of PLA, PHB, PHBV, and **collagen** from **fish skin** . Zein can be degraded by both trypsin and collagenase, and the degradation product can enhance...
...; drug effects--DE; Cell Proliferation--drug effects--DE; Cell Survival--drug effects--DE; Cells, Cultured; **Collagen** --chemistry--CH; **Collagen** --pharmacology--PD; Collagenases--chemistry--CH; Comparative Study; Humans; **Lactic Acid** --chemistry--CH; **Lactic Acid** --pharmacology--PD; Polyesters--chemistry--CH; Polyesters--pharmacology --PD; Polymers--chemistry--CH; Polymers--pharmacology--PD; Research...
Chemical Name: Biocompatible Materials; Polyesters; Polymers; poly(3-hydroxybutyrate)-co-(3-hydroxyvalerate); poly(**lactic acid**); **Lactic Acid** ; **Collagen** ; Zein; Trypsin; Collagenases
? t s5/9,k/all

5/9,K/1 (Item 1 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci
(c) 2006 Inst for Sci Info. All rts. reserv.

14118709 Genuine Article#: 942AX Number of References: 28
Title: Use of lactic acid **for extraction of** fish skin **gelatin**
Author(s): Gimenez B; Turnay J; Lizarbe MA; Montero P; Gomez-Guillen MC (REPRINT)
Corporate Source: CSIC,Inst Frio,Ciudad Univ/E-28040 Madrid//Spain/ (REPRINT); CSIC,Inst Frio,E-28040 Madrid//Spain/; Univ Complutense,Fac Ciencias Quim, Dept Bioquim & Biol Mol 1,E-28040 Madrid//Spain/(cgomez@if.csic.es)
Journal: FOOD HYDROCOLLOIDS, 2005, V19, N6 (NOV), P941-950

ISSN: 0268-005X Publication date: 20051100
Publisher: ELSEVIER SCI LTD, THE BOULEVARD, LANGFORD LANE, KIDLINGTON, OXFORD OX5 1GB, OXON, ENGLAND
Language: English Document Type: ARTICLE
Geographic Location: Spain
Journal Subject Category: CHEMISTRY, APPLIED; FOOD SCIENCE & TECHNOLOGY

Abstract: The ability of **lactic acid** compared to acetic acid for Dover sole (Solea vulgaris) skin swelling and the subsequent gelatin extraction was examined. The resultant gelatins were evaluated in terms of extraction yield, amino acid composition, molecular weight distribution, gel strength, viscoelastic properties, ability to refold into triple helical structures, and aggregation phenomena. **Lactic acid** (25 mM) proved to be an excellent substitute for acetic acid during the skin swelling process, as the gelatin preparation thus obtained presented quite similar properties to that prepared by using 50 mM acetic acid without the negative organoleptic properties of this acid. However, the application of 50 mM **lactic acid** gave rise to a highly hydrolysed gelatin, with lower folding ability, gel strength and viscoelastic properties than those obtained using 25 mM **lactic acid** or 50 mM acetic acid. (C) 2004 Elsevier Ltd. All rights reserved.

Descriptors--Author Keywords: circular dichroism ; gel strength ; gelatin extraction ; gelation ; viscoelastic properties
Identifiers--KeyWord Plus(R): **COLLAGEN** TRIPLE-HELIX; FUNCTIONAL-PROPERTIES; HYSTERESIS; STEP

Cited References:
0100275, 2001, GOMEZGUILLEN MC
US 5093474, 1992, GROSSMAN S
ASGHAR A, 1982, V28, P232, ADV FOOD RES
BURJANADZE TV, 1979, V18, P931, BIOPOLYMERS
DAVIS JM, 1993, V268, P25965, J BIOL CHEM
DJABOUROV M, 1993, V30, P191, BIORHEOLOGY
ENGEL J, 1987, V4, P145, ADV MEAT RES
ENGEL J, 2000, V19, P235, MATRIX BIOL
GOMEZGUILLEN MC, 2002, V16, P25, FOOD HYDROCOLLOID
GOMEZGUILLEN MC, 2001, V66, P213, J FOOD SCI
GUDMUNDSSON M, 1997, V62, P37, J FOOD SCI
GUSTAVSON K, 1956, P102, CHEM REACTIVITY COLL
JOHNSTONBANKS FA, 1990, P233, GELATIN FOOD GELS
LAEMMLI UK, 1970, V227, P680, NATURE
LEDWARD DA, 1986, P171, FUNCTIONAL PROPERTIE
MIZUNO K, 2003, V278, P32373, J BIOL CHEM
MONTERO P, 1995, V60, P1, J FOOD SCI
MONTERO P, 1990, V38, P604, J AGR FOOD CHEM
MONTERO P, 2000, V65, P434, J FOOD SCI
NORLAND RE, 1990, P325, ADV FISHERIES TECHNO
NORMAND V, 2000, V33, P1063, MACROMOLECULES
OGAWA M, 2003, V51, P8088, J AGR FOOD CHEM
SARABIA AI, 2000, V70, P71, FOOD CHEM
SIMS TJ, 1997, V45, P171, IMAGING SCI J
STAINSBY G, 1987, V4, P209, ADV MEAT RES
TROMP RH, 2002, V16, P235, FOOD HYDROCOLLOID
XU YJ, 2002, V41, P8143, BIOCHEMISTRY-US
XU YJ, 2003, V42, P8696, BIOCHEMISTRY-US

Title: **Use of** lactic acid **for extraction of** fish skin **gelatin**

Abstract: The ability of **lactic acid** compared to acetic acid for Dover sole (Solea vulgaris) skin swelling and the subsequent gelatin...

...distribution, gel strength, viscoelastic properties, ability to refold into triple helical structures, and aggregation phenomena. **Lactic acid** (25 mM) proved to be an excellent substitute for acetic acid during the skin swelling...

...acid without the negative organoleptic properties of this acid. However, the application of 50 mM **lactic acid** gave rise to a highly hydrolysed gelatin, with lower folding ability, gel strength and viscoelastic properties than those obtained using 25 mM **lactic acid** or 50 mM acetic acid. (C) 2004 Elsevier Ltd. All rights reserved.
...Identifiers-- **COLLAGEN** TRIPLE-HELIX; FUNCTIONAL-PROPERTIES; HYSTERESIS; STEP

5/9,K/2 (Item 2 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci
(c) 2006 Inst for Sci Info. All rts. reserv.

09691549 Genuine Article#: 435KG Number of References: 15
Title: Extraction of gelatin from megrim (Lepidorhombus boscii) skins with several organic acids
Author(s): Gomez-Guillen MC (REPRINT) ; Montero P
Corporate Source: CSIC,Inst Frio,Ciudad Univ/E-28040 Madrid//Spain/ (REPRINT); CSIC,Inst Frio,E-28040 Madrid//Spain/
Journal: JOURNAL OF FOOD SCIENCE, 2001, V66, N2 (MAR), P213-216
ISSN: 0022-1147 Publication date: 20010300
Publisher: INST FOOD TECHNOLOGISTS, SUITE 300 221 N LASALLE ST, CHICAGO, IL 60601-1291 USA
Language: English Document Type: ARTICLE
Geographic Location: Spain
Journal Subject Category: FOOD SCIENCE & TECHNOLOGY
Abstract: Light-colored, dry **collagen** was obtained and, after dissolving in warm water, turned into soluble gelatin. The type of acid used influenced the gelatin viscoelastic and gelling properties. Acetic- and propionic-acid extracts produced the gelatins with the highest elastic modulus, viscous modulus, melting temperature, and gel strength, especially when skins were previously treated with dilute NaOH. After such treatment, **lactic acid** was also shown to be suitable for **collagen** or gelatin extraction, The lowest degree of turbidity was achieved by using citric acid, whereas propionic acid led to the most turbid gelatin. No improvements of rheological properties were observed when acid concentration for extraction was increased above 0.05 M.
Descriptors--Author Keywords: gelatin ; **collagen** ; **fish skin** ; **extraction** ; acids ; functional properties
Identifiers--KeyWord Plus(R): **COLLAGEN**
Cited References:
US 5093474, 1992, GROSSMAN S
ASGHAR A, 1982, V28, P232, ADV FOOD RES
GUDMUNDSSON M, 1997, V62, P37, J FOOD SCI
GUDMUNDSSON M, 1997, V62, P47, J FOOD SCI
GUSTAVSON K, 1956, P102, CHEM REACTIVITY COLL
JOHNSTONBANKS FA, 1990, P233, FOOD GELS
KIM JS, 1996, V39, P134, AGR CHEM BIOTECH
LEDWARD DA, 1986, P171, FUNCTIONAL PROPERTIE
LEUENBERGER BH, 1991, V5, P353, FOOD HYDROCOLLOID
MONTERO P, 1990, V38, P604, J AGR FOOD CHEM

MONTERO P, 1995, V60, P1, J FOOD SCI
NORLAND RE, 1990, P325, ADV FISHERIES TECHNO
OSBORNE R, 1990, P143, ADV FISHERIES TECHNO
SATO K, 1987, V53, P1431, NIPPON SUISAN GAKK
STAINSBY G, 1987, V4, P209, ADV MEAT RES

Abstract: Light-colored, dry **collagen** was obtained and, after dissolving in warm water, turned into soluble gelatin. The type of...

...and gel strength, especially when skins were previously treated with dilute NaOH. After such treatment, **lactic acid** was also shown to be suitable for **collagen** or gelatin extraction, The lowest degree of turbidity was achieved by using citric acid, whereas...
...Identifiers-- **COLLAGEN**

5/9,K/3 (Item 1 from file: 50)
DIALOG(R)File 50:CAB Abstracts
(c) 2006 CAB International. All rts. reserv.

0008716420 CAB Accession Number: 20043185151
Isolation of collagen **from freshwater** fish skin .
Fu YanFeng; Shen YueXin; Yang ChengGang; Zhang Yuan
Author email address: yxshen@shfu.edu.cn
College of Food Science, Shanghai Fisheries University, Shanghai 200090, China.
Journal of Shanghai Fisheries University vol. 13 (2): p.146-150
Publication Year: 2004
ISSN: 1004-7271
Publisher: Editorial Committee of Journal of Shanghai Fisheries University Shanghai, China
Language: Chinese Summary Language: English Record Type: Abstract
Document Type: Journal article

Collagen was isolated from the skin of three freshwater fishes, viz. silver carp (Hypophthalmichthys molitrix), bighead carp (Aristichthys nobilis) and grass carp (Clenopharyngodon idellus) using organic acids (acetic acid, citric acid and **lactic acid**). The skin of silver carp, bighead carp and grass carp were found to have 25.9, 23.6 and 29.8% protein and 1.8, 1.9 and 2.3% hydroxyproline, respectively. When the fish skins were mixed two times with 2.5 or 5.0% NaCl solution at a ratio of material to solvent of 1:10, at 5(deg)C for 12 h, about 5.9, 6.7 and 9.1% soluble non-collagenous protein was separated, respectively for silver, bighead and grass carps. At the ratio of 1:30, 78.9, 84.1 and 82.0% of **collagen** were extracted from the silver, bighead and grass carp skins using acetic or citric acids. Whiteness was highest for the **collagen** preparation obtained from the skin of grass carp, followed by those from silver carp and bighead carp.
11 ref.

DESCRIPTORS: chemical composition; **collagen** ; fish; hydroxyproline; protein content; skin
IDENTIFIERS: Clenopharyngodon idellus
CAS REGISTRY NUMBERS: 51-35-4
ORGANISM DESCRIPTORS: Aristichthys nobilis; Hypophthalmichthys molitrix
BROADER TERMS: Aristichthys; Cyprinidae; Cypriniformes; Osteichthyes; fishes; vertebrates; Chordata; animals; aquatic animals; aquatic organisms; Hypophthalmichthys

CABICODES: Animal Physiology and Biochemistry (Excluding Nutrition)
(LL600); Aquaculture (Animals) (MM120); Aquatic Biology and Ecology
(MM300); Aquatic Produce (QQ060); Food Composition and Quality (QQ500)

Isolation of collagen **from freshwater** fish skin .
Collagen was isolated from the skin of three freshwater fishes, viz. silver carp (Hypophthalmichthys molitrix), bighead...

...Aristichthys nobilis) and grass carp (Clenopharyngodon idellus) using organic acids (acetic acid, citric acid and **lactic acid**). The skin of silver carp, bighead carp and grass carp were found to have 25...

...carps. At the ratio of 1:30, 78.9, 84.1 and 82.0% of **collagen** were extracted from the silver, bighead and grass carp skins using acetic or citric acids. Whiteness was highest for the **collagen** preparation obtained from the skin of grass carp, followed by those from silver carp and...

...DESCRIPTORS: **collagen** ;

5/9,K/4 (Item 1 from file: 71)
DIALOG(R)File 71:ELSEVIER BIOBASE
(c) 2006 Elsevier Science B.V. All rts. reserv.

01746660 2001121663
Extraction of gelatin from megrim (Lepidorhombus boscii) skins with several organic acids
Gomez-Guillen M.C.; Montero P.
ADDRESS: M.C. Gomez-Guillen, Instituto del Frio (CSIC), Ciudad
Universitaria, 28040 Madrid, Spain
EMAIL: cgomez@if.csic.es
Journal: Journal of Food Science, 66/2 (213-216), 2001, United States
CODEN: JFDSA
ISSN: 0022-1147
DOCUMENT TYPE: Article
LANGUAGES: English SUMMARY LANGUAGES: English
NO. OF REFERENCES: 15

Light-colored, dry **collagen** was obtained and, after dissolving in warm water, turned into soluble gelatin. The type of acid used influenced the gelatin viscoelastic and gelling properties. Acetic- and propionic-acid extracts produced the gelatins with the highest elastic modulus, viscous modulus, melting temperature, and gel strength, especially when skins were previously treated with dilute NaOH. After such treatment, **lactic acid** was also shown to be suitable for **collagen** or gelatin extraction. The lowest degree of turbidity was achieved by using citric acid, whereas propionic acid led to the most turbid gelatin. No improvements of theological properties were observed when acid concentration for extraction was increased above 0.05 M.

DESCRIPTORS:
Gelatin; **Collagen** ; **Fish skin** ; **Extr** action; Acids; Functional properties

SPECIES DESCRIPTORS:
Lepidorhombus boscii

CLASSIFICATION CODE AND DESCRIPTION:
85.5.1 - APPLIED MICROBIOLOGY AND BIOTECHNOLOGY / ANIMAL BIOTECHNOLOGY / Production of Compounds
85.1.8.3 - APPLIED MICROBIOLOGY AND BIOTECHNOLOGY / BIOTECHNOLOGY - TECHNIQUES AND PROCEDURES / Downstream Processing / Cell disruption and separation

Light-colored, dry **collagen** was obtained and, after dissolving in warm water, turned into soluble gelatin. The type of...
...and gel strength, especially when skins were previously treated with dilute NaOH. After such treatment, **lactic acid** was also shown to be suitable for **collagen** or gelatin extraction. The lowest degree of turbidity was achieved by using citric acid, whereas...

DESCRIPTORS:
Gelatin; **Collagen** ; **Fish skin** ; **Extr** action; Acids; Functional properties

---

5/9,K/5 (Item 1 from file: 98)
DIALOG(R)File 98:General Sci Abs
(c) 2005 The HW Wilson Co. All rts. reserv.

04501759 H.W. WILSON RECORD NUMBER: BGSA01001759 (THIS IS THE FULLTEXT)
Evolutionary origin of feathers.
AUGMENTED TITLE: symposium
American Zoologist (Am Zool) v. 40 no4 (Sept. 2000) p. 455-706
ISSN: 0003-1569
LANGUAGE: English
COUNTRY OF PUBLICATION: United States
RECORD TYPE: Abstract; Fulltext RECORD STATUS: Corrected or revised record
WORD COUNT: 158028

ABSTRACT: A special issue devoted to the symposium "Evolutionary Origin of Feathers," presented at the Annual Meeting of the Society for Integrative and Comparative Biology in January 1999.

TEXT:

THE EVOLUTIONARY ORIGIN OF FEATHERS: A PROBLEM DEMANDING INTERDISCIPLINARY COMMUNICATION(FN1)

THE ORIGINS OF THIS SYMPOSIUM

The last contributed paper in the last session of the Division of Vertebrate Morphology on the last day of the SICB meeting in December 1995 reevaluated the long-standing problem of how feathers move (see Homberger and de Silva, 1995). Dominique Homberger's interpretation of the involvement of the extensive cutaneous and subcutaneous fat as a hydraulic skeleton in this context was most intriguing to Gopi Menon and Paul Maderson. This adipose tissue was one of many puzzling features of sauropsid (sensu Laurin and Reisz, 1995: 180) skin that had attracted their attention during the writing of a paper on avian cutaneous water loss (see Menon et al., 1996). Two realizations emerged from considering the observations in these papers. First, available data imply that, in many aspects, avian skin resembles that of reptiles more than that of mammals. Second, there are surprising gaps in our knowledge of the structure, function, and physiology of avian skin, and the absence of critical data